

Access DB# 139394

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Amanda Wake Examiner #: 75463 Date: 12/2/04  
Art Unit: 1752 Phone Number: 202-1337 Serial Number: 101788963  
Mail Box and Bldg/Room Location: REM 9004 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bib Sheet Attached

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Please search for compd of formula I. Thank you.*

### STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Usher Shoersta</u>	NA Sequence (#) _____	STN <u>4 518.80</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>12/10/04</u>	Bibliographic _____	Dr.Link _____
Date Completed: <u>12/10/04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>40</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>200</u>	Other _____	Other (specify) _____



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 139374

TO: Amanda Walke  
Location: REM 9D64  
Art Unit : 1752  
December 13, 2004

Case Serial Number: 10/788963

From: Usha Shrestha  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-3519  
usha.shrestha@uspto.gov

## Search Notes



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

➤ I am an examiner in Workgroup:  Example: 1713

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

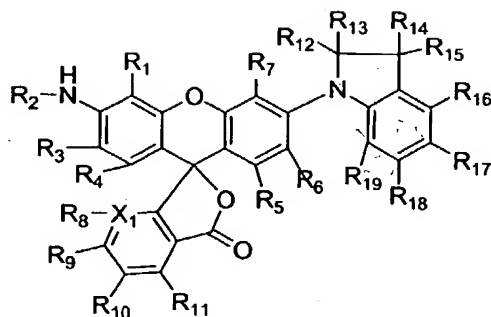
Drop off or send completed forms to EIC1700 REMSEN 4B28



8587AFP

WHAT IS CLAIMED IS:

1. A compound represented by the formula



(I)

wherein:

R<sub>1</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are each independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted, alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur;

R<sub>2</sub> is selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, sulfonyl, aryl, substituted aryl, heteroaryl,

substituted heteroaryl, substituted oxygen, substituted nitrogen and substituted sulfur;

$R_8$  is absent or selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur;

$R_9$ ,  $R_{10}$  and  $R_{11}$  are independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur;

$R_{12}$ ,  $R_{13}$ ,  $R_{14}$  and  $R_{15}$  are independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, aryl, substituted aryl, heteroaryl, and substituted heteroaryl;

$R_{16}$ ,  $R_{17}$ ,  $R_{18}$  and  $R_{19}$  are independently selected from the group consisting of hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl,

alkynyl, substituted alkynyl, heterocycloalkyl, substituted heterocycloalkyl, substituted carbonyl, acylamino, halogen, nitro, nitrilo, sulfonyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, oxygen, substituted oxygen, nitrogen, substituted nitrogen, sulfur and substituted sulfur; and

X<sub>1</sub> is carbon or nitrogen.

2. A compound according to Claim 1 wherein R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> are halogen, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, R<sub>12</sub>, R<sub>13</sub>, R<sub>14</sub>, R<sub>15</sub>, R<sub>16</sub>, R<sub>17</sub>, R<sub>18</sub> and R<sub>19</sub> are as defined in Claim 1 and X<sub>1</sub> is carbon.

3. The imaging member comprising a first image-forming layer including a compound according to Claim 1, said compound being in the crystalline form.

4. The imaging member as defined in Claim 3 and further including a substrate and at least a second color-forming layer, said second color-forming layer being capable of forming a color different from that formed by said first color-forming layer.

5. The imaging member as defined in Claim 4 and further including a third color-forming layer, said third color-forming layer being capable of forming a color different from those formed by said first and second color-forming layers.

6. The imaging member as defined in Claim 5 wherein said color-forming layers form magenta, cyan and yellow color, respectively.

7. The imaging method comprising  
(a) providing an imaging member as defined in Claim 3; and  
(b) converting at least a portion of said compound to the liquid form in an imagewise pattern whereby an image is formed.

8. The method as defined in Claim 7 wherein step (b) comprises applying an imagewise pattern of thermal energy to said imaging member whereby at least a portion of said compound is converted to the liquid form and an image is formed.

9. The thermal imaging method as defined in Claim 8 wherein said imaging member further includes a substrate and at least a second color-forming layer, said second color-forming layer being capable of forming a color different from that formed by said first color-forming layer.

10. The imaging method as defined in Claim 8 wherein said imaging member further includes a third color-forming layer, said third color-forming layer being capable of forming a color different from those formed by said first and second color-forming layers.

8587AFP

11. The imaging method as defined in Claim 10 wherein said color-forming layers form magenta, cyan and yellow color, respectively.



10/788963      Examiner: WALKER, AMANDA      GAU: 1752  
Classification: 430/357.000      Inventor: CHEON, KAP-SOO, et al  
Status: 30 - DOCKETED NEW CASE - READY FOR EXAMINATION  
Title: NOVEL DYES AND USE THEREOF IN IMAGING MEMBERS AND METHODS

Bib Data report

**Application Title:** NOVEL DYES AND USE THEREOF IN IMAGING MEMBERS AND METHODS

**Application Num:** 10788963 (in phx)      **Filing Date:** 02/27/2004  
**Effective Filing:** 02/27/2004  
(Location History)      (Foreign/Continuity Data)

**Status:** 30/DOCKETED NEW CASE - READY FOR EXAMINATION      **Status Date:** 09/25/2004

**Patent Number:** Not Issued      **Issue Date:** N/A      **Date of Abandonment:** N/A  
**Confirmation Number:** 6695      **PALM Location:**

**Examiner:** 75663      WALKER, AMANDA (Assignment Data)      **Group Art Unit:** 1752  
**Class/Subclass:** 430/357.000

**State or Country:** MASSACHUSETTS      **Sheets/Drawing:** 0      **Total Claims:** 11  
**Independent Claims:** 1

▼ **Inventors:**

Last name, First name:	City:	Country or State:
CHEON, KAP-SOO	SHREWSBURY	MASSACHUSETTS
FILOSA, MICHAEL	MEDFIELD	MASSACHUSETTS
MARSHALL, JOHN	LEXINGTON	MASSACHUSETTS

**Attorneys:** ALL      **Attorney Docket No:** 8587-AFP/GDM

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:40:40 ON 10 DEC 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 9 DEC 2004 HIGHEST RN 796026-09-0  
DICTIONARY FILE UPDATES: 9 DEC 2004 HIGHEST RN 796026-09-0

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d his

(FILE 'HOME' ENTERED AT 09:40:11 ON 10 DEC 2004)

FILE 'LREGISTRY' ENTERED AT 09:40:17 ON 10 DEC 2004

L1 STR  
L2 STR L1  
L3 STR L1  
L4 STR L2

FILE 'REGISTRY' ENTERED AT 10:54:42 ON 10 DEC 2004

L5 50 S L4  
L6 STR L2  
L7 50 S L6  
L8 8631 S L6 FULL  
SAV L8 WAL566/A

FILE 'HCAPLUS' ENTERED AT 11:37:04 ON 10 DEC 2004

L9 1195 S CHEON ?/AU  
L10 23478 S CHU ?/AU  
L11 128 S FILOSA ?/AU  
L12 413 S TELFER ?/AU  
L13 0 S L9 AND L10 AND L11 AND L12

FILE 'HCAPLUS' ENTERED AT 11:57:48 ON 10 DEC 2004

L14 57 S CHEON K?/AU  
L15 1169 S CHU P?/AU  
L16 128 S FILOSA ?/AU  
L17 413 S TELFER ?/AU  
S L1 AND L2 AND L3 AND L4

FILE 'HCAPLUS' ENTERED AT 11:59:34 ON 10 DEC 2004

L18 0 S L14 AND L15 AND L16 AND L17  
L19 0 S L14 AND L15  
L20 1 S L14 AND L16  
L21 0 S L14 AND L17  
L22 0 S L15 AND L16  
L23 3 S L15 AND L17  
L24 3 S L16 AND L17  
L25 7 S L18-L24  
SEL L25-1-7 RN

FILE 'REGISTRY' ENTERED AT 12:04:30 ON 10 DEC 2004

L26 272 S E1-E272  
L27 97 S C34H4005  
L28 1 S L26 AND L27  
L29 12534 S 7938.12.8/RID  
L30 36 S L29 AND L26  
L31 0 S L1 SSS SAM SUB=L8  
L32 STR L1  
L33 1 S L32 SSS SAM SUB=L8  
L34 2 S L32 SSS FUL SUB=L8

FILE 'HCAPLUS' ENTERED AT 12:38:21 ON 10 DEC 2004

L35 1 S L34

FILE 'REGISTRY' ENTERED AT 12:40:54 ON 10 DEC 2004

SAV L34 WAL566A/A  
L36 50 S L3 SSS SAM SUB=L8  
L37 6577 S L3 SSS FUL SUB=L8  
SAV L37 WAL566B/A  
L38 9 S L30 AND L37

FILE 'CAOLD' ENTERED AT 13:07:30 ON 10 DEC 2004

L39 0 S L34  
L40 0 S L38

FILE 'HCAPLUS' ENTERED AT 13:07:58 ON 10 DEC 2004

L41 1 S L38  
E OPTICAL IMAGING DEVICES/CV  
L42 31947 S E3

L43 147550 S IMAGING#  
L44 352089 S DYE?  
L45 20476 S L37  
L46 41 S L45 AND L42  
L47 654 S L45 AND L43  
L48 6853 S L45 AND L44  
L49 41 S L46 AND L47  
L50 27 S L46 AND L48  
L51 240 S L47 AND L48  
L52 27 S L49 AND L51

FILE 'HCAPLUS' ENTERED AT 13:17:44 ON 10 DEC 2004  
L53 27 S L51 AND L52

FILE 'REGISTRY' ENTERED AT 13:18:37 ON 10 DEC 2004  
L54 STR L3  
L55 0 S L54 SSS SAM SUB=L37  
L56 0 S L54 SSS SAM SUB=L37  
L57 1 S L54 SSS FUL SUB=L37  
SAV L57 WAL566C/A

FILE 'HCAPLUS' ENTERED AT 13:26:11 ON 10 DEC 2004  
L58 1 S L57

FILE 'LREGISTRY' ENTERED AT 13:27:40 ON 10 DEC 2004  
L59 STR L3

FILE 'REGISTRY' ENTERED AT 14:04:20 ON 10 DEC 2004  
L60 0 S L59 SSS SAM SUB=L37  
L61 STR L59  
L62 0 S L61 SSS SAM SUB=L37  
L63 STR L61  
L64 50 S L63 SSS SAM SUB=L37  
L65 STR L59  
L66 STR L61  
L67 2 S L65 SSS SAM SUB=L37  
L68 37 S L65 SSS FUL SUB=L37  
SAV L68 WAL566D/A

FILE 'HCAPLUS' ENTERED AT 14:16:49 ON 10 DEC 2004  
L69 34 S L68

FILE 'REGISTRY' ENTERED AT 14:17:20 ON 10 DEC 2004  
L70 3 S L66 SSS SAM SUB=L37  
L71 110 S L66 SSS FUL SUB=L37  
SAV L71 WAL566E/A

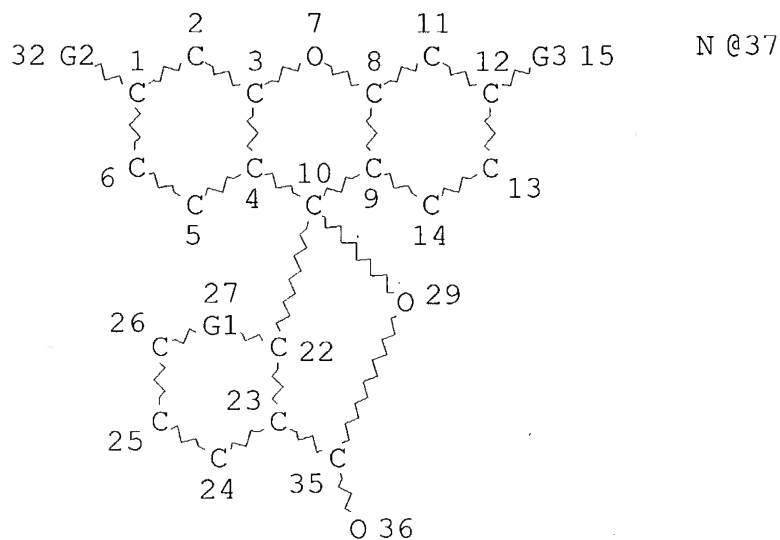
FILE 'HCAPLUS' ENTERED AT 14:19:13 ON 10 DEC 2004

L72 66 S L71  
L73 1 S L72 AND L42  
L74 5 S L72 AND L43  
L75 34 S L72 AND L44  
L76 1 S L75 AND (L50 OR L52 OR L53)  
L77 875772 S OPTIC?  
L78 14 S L72 AND L77  
L79 10 S L78 AND (L42 OR L43 OR L44)  
L80 18 S L41 OR L58 OR L73 OR L74 OR L76 OR L79 OR L78  
L81 60 S (L50 OR L52 OR L53 OR L69)  
L82 59 S (L50 OR L52 OR L53 OR L69) NOT L80  
L83 21 S L75 NOT (L80 OR L82)

FILE 'REGISTRY' ENTERED AT 14:40:40 ON 10 DEC 2004

=> d 134 que stat

L6 STR



VAR G1=C/N

VAR G2=N/O

VAR G3=O/37

NODE ATTRIBUTES:

NSPEC IS RC AT 37

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

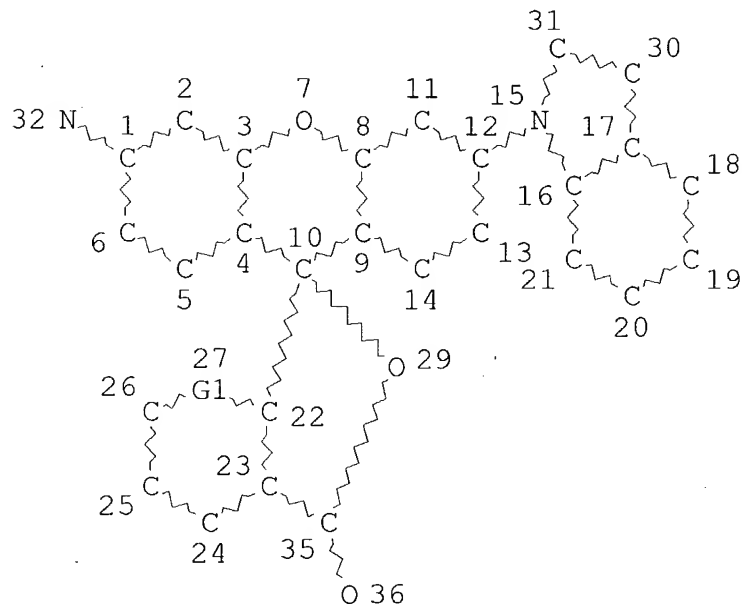
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L8 8631 SEA FILE=REGISTRY SSS FUL L6

L32 STR



VAR G1=C/N

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 33

STEREO ATTRIBUTES: NONE

L34 2 SEA FILE=REGISTRY SUB=L8 SSS FUL L32

100.0% PROCESSED 75 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

=> fil hcplus

FILE 'HCAPLUS' ENTERED AT 14:41:24 ON 10 DEC 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 10 Dec 2004 VOL 141 ISS 25  
FILE LAST UPDATED: 9 Dec 2004 (20041209/ED)

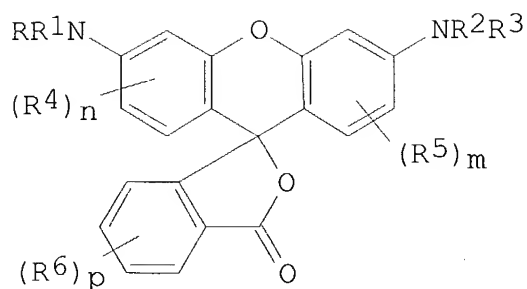
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 135 1 ibib abs hitstr hitind

L35 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1982:26837 HCAPLUS  
DOCUMENT NUMBER: 96:26837  
TITLE: Color formers for image recording materials  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 56077189	A2	19810625	JP 1979-155117	19791130
JP 01007596	B4	19890209		
GB 2066835	A	19810715	GB 1980-38350	19801128
GB 2066835	B2	19841031		
DE 3045022	A1	19810827	DE 1980-3045022	19801128
DE 3045022	C2	19900809		
ES 497304	A1	19811201	ES 1980-497304	19801128
US 4390616	A	19830628	US 1980-212010	19801201
ES 505548	A1	19820601	ES 1981-505548	19810916
US 4436920	A	19840313	US 1982-357105	19820311
PRIORITY APPLN. INFO.:			JP 1979-155117	
19791130				
			US 1980-212010	
19801201				

GI



I

AB Diarylamino fluorans I (R, R<sup>1</sup> = aryl, heterocyclic moiety; RR<sup>1</sup> in combination may form a heterocycle; R<sup>2</sup>, R<sup>3</sup> = H, alkyl, cycloalkyl, aralkyl, aryl, heterocyclic moiety; R<sup>2</sup>R<sup>3</sup> combination may form a heterocycle; R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> = alkyl, alkoxy, halo, NO<sub>2</sub>, NH<sub>2</sub>, alkylamino, dialkylamino, acylamino; n, m = 0-3; p = 0-4) are used as the dye precursors for pressure- or heat-sensitive imaging materials. Thus, 3',6'-bis(diphenylamino)fluoran was dissolved in an alkyl naphthalene

and the solution was microencapsulated. The pressure-sensitive copying paper obtained by using the microcapsule dispersion showed good coloration characteristics and gave a copy having excellent light fastness and heat resistance.

IT 80323-12-2 80323-13-3

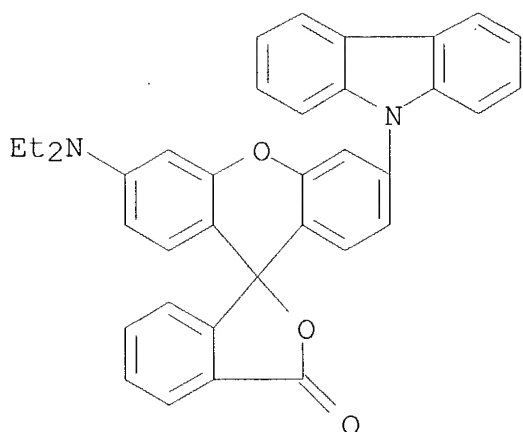
RL: USES (Uses)

(dye precursor, for image recording paper)

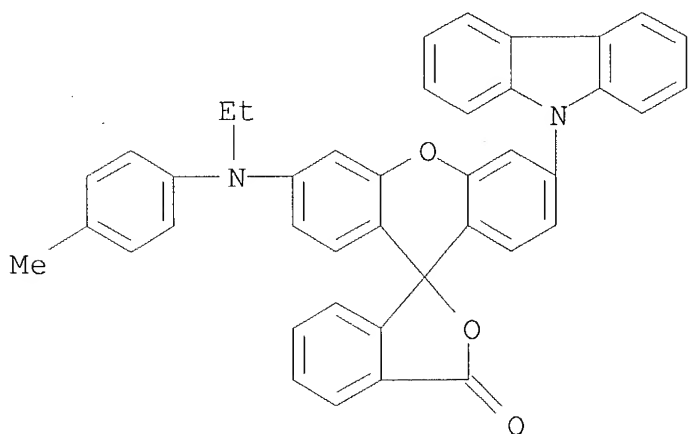
RN 80323-12-2 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,  
3'-(9H-carbazol-9-yl)-6'-  
(diethylamino)- (9CI) (CA INDEX NAME)





RN 80323-13-3 HCAPLUS  
CN Spiro[isobenzofuran-1(3H), 9'-(9H)xanthen]-3-one,  
3'-(9H-carbazol-9-yl)-6'-  
[ethyl(4-methylphenyl)amino]-(9CI) (CA INDEX NAME)



IC B41M005-12; C09B011-28  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
IT 80323-05-3 80323-06-4 80323-07-5 80323-08-6 80323-09-7  
80323-10-0 80323-11-1 80323-12-2 80323-13-3  
80323-14-4  
RL: USES (Uses)  
(dye precursor, for image recording paper)

=>